

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM nucleic - nucleic search, using sw model

Run on: November 25, 2000, 04:36:10 ; Search time 88 Seconds
(without alignments)
2010.649 Million cell updates/sec

Title: US-09-373-230-1
Perfect score: 471
Sequence: 1 AACTTTGCCGCACTTCACTG.....TCACCTAATTACATCAAGT 471

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 480022 seqs, 187831343 residues

Total number of hits satisfying chosen parameters: 960044

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :
1: N_Geneseq_36:*
2: /SIDS6/gcgdata/geneseq/geneseqn/NA1980.DAT:*
3: /SIDS6/gcgdata/geneseq/geneseqn/NA1981.DAT:*
4: /SIDS6/gcgdata/geneseq/geneseqn/NA1982.DAT:*
5: /SIDS6/gcgdata/geneseq/geneseqn/NA1983.DAT:*
6: /SIDS6/gcgdata/geneseq/geneseqn/NA1984.DAT:*
7: /SIDS6/gcgdata/geneseq/geneseqn/NA1985.DAT:*
8: /SIDS6/gcgdata/geneseq/geneseqn/NA1986.DAT:*
9: /SIDS6/gcgdata/geneseq/geneseqn/NA1987.DAT:*
10: /SIDS6/gcgdata/geneseq/geneseqn/NA1988.DAT:*
11: /SIDS6/gcgdata/geneseq/geneseqn/NA1989.DAT:*
12: /SIDS6/gcgdata/geneseq/geneseqn/NA1990.DAT:*
13: /SIDS6/gcgdata/geneseq/geneseqn/NA1991.DAT:*
14: /SIDS6/gcgdata/geneseq/geneseqn/NA1992.DAT:*
15: /SIDS6/gcgdata/geneseq/geneseqn/NA1993.DAT:*
16: /SIDS6/gcgdata/geneseq/geneseqn/NA1994.DAT:*
17: /SIDS6/gcgdata/geneseq/geneseqn/NA1995.DAT:*
18: /SIDS6/gcgdata/geneseq/geneseqn/NA1996.DAT:*
19: /SIDS6/gcgdata/geneseq/geneseqn/NA1997.DAT:*
20: /SIDS6/gcgdata/geneseq/geneseqn/NA1998.DAT:*
21: /SIDS6/gcgdata/geneseq/geneseqn/NA1999.DAT:*
22: /SIDS6/gcgdata/geneseq/geneseqn/NA2000.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	470.6	99.9	471	T32403	Mouse interferon-g
2	470.6	99.9	471	T16224	Interferon gamma p
3	470.6	99.9	471	T60536	Mouse interferon-g
4	470.6	99.9	471	T80210	Murine protein for
5	470.6	99.9	471	V48227	Mouse interleukin
6	470.6	99.9	471	Z36923	DNA encoding a pro
7	470.6	99.9	471	V32755	Wild-type mouse in
8	469	99.6	471	V32633	Mutant mouse inter
9	467.4	99.2	471	V32632	Mutant mouse inter
10	400.6	85.1	722	V20875	Nucleotide sequenc
11	279.8	59.4	665	V20876	Nucleotide sequenc
12	268.4	57.0	582	Z55624	Equine interleukin

13	249.2	52.9	477	21	A10526	Human interleukin-
14	247.8	52.6	471	19	V48226	Human interleukin
15	247.8	52.6	471	19	V32625	Mutant human inter
16	247.8	52.6	471	19	V32626	Mutant human inter
17	247.8	52.6	570	19	V32754	Wild-type human in
18	247.8	52.6	1101	18	T74988	Interferon gamma i
19	247.8	52.6	1101	18	T74987	Interferon gamma i
20	247.8	52.6	1380	19	V05368	CDNA encoding huma
21	247.4	52.5	471	17	T32411	Human interferon-g
22	247.4	52.5	471	17	T32402	Human interferon-g
23	247.4	52.5	471	18	T80209	Human protein for
24	247.4	52.5	579	19	V18906	Interferon-gamma i
25	247.4	52.5	579	19	V18906	Interferon-gamma i
26	247.4	52.5	579	19	V17200	Human interferon-g
27	247.4	52.5	1120	17	T32404	CDNA for interfero
28	247.4	52.5	1120	19	V15825	DNA encoding a pro
29	247.4	52.5	1120	21	Z36876	Mutant human inter
30	246.2	52.3	471	19	V32627	Mutant human inter
31	246.2	52.3	471	19	V32628	Human interleukin
32	244.6	51.9	471	19	V48229	Mutant human inter
33	244.6	51.9	471	19	V32629	Recombinant canine
34	244.6	51.9	471	19	V32630	Canine interleukin
35	244.4	51.9	540	20	X27732	Canine interleukin
36	244.4	51.9	540	21	A13801	Canine interleukin
37	244.4	51.9	582	20	X27724	Canine interleukin
38	244.4	51.9	582	21	A13793	Canine interleukin
39	244.4	51.9	582	21	Z55623	Canine interleukin
40	244.4	51.9	1427	20	X27726	Canine interleukin
41	244.4	51.9	1427	21	A13795	Canine interleukin
42	243	51.6	471	19	V48230	Human interleukin
43	243	51.6	471	19	V32631	Mutant human inter
44	127.8	27.1	11464	19	V48228	Interleukin 18 con
45	127.8	27.1	28994	19	V15826	Genomic DNA for in

ALIGNMENTS

RESULT 1	
T32403	T32403 standard; cDNA to mRNA; 471 BP.
AC	T32403;
XX	
DT	29-SEP-1996 (first entry)
XX	
DE	Mouse interferon-gamma inducer protein cDNA.
XX	
KW	Interferon-gamma inducer protein; IFN-gamma; antiviral; virocidic;
KW	antitumour; antibacterial; immunoregulatory; adoptive immunotherapy;
KW	therapy; cancer; ds.
XX	
OS	Mus sp.
XX	
PN	EP712931-A2.
XX	
PD	22-MAY-1996.
XX	
PF	10-NOV-1995; 95EP-0308055.
XX	
PR	29-SEP-1995; 95JP-0274988.
PR	15-NOV-1994; 94JP-0304203.
PR	23-FEB-1995; 95JP-0058240.
PR	10-MAR-1995; 95JP-0078357.
PR	18-SEP-1995; 95JP-0262062.
XX	
PA	(HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
XX	
PI	Fukuda S, Kohno K, Kunikata T, Kurimoto M, Okamura H;
PI	Taniguchi M, Tanimoto T, Torigoe K, Ushio S;
XX	
DR	WPI: 1996-252837/26.
DR	P-PSDB; R99559.

XX DNA encoding interferon-gamma prodn.-inducing polypeptide - useful
PT to treat and prevent, e.g. viral disease, malignancies and immune
PT disorders

XX Example A-3-2; Page 36-37; 48pp; English.

XX A cDNA clone (T32403) codes for a novel mouse protein (R99559) that
CC induces interferon-gamma (IFN-gamma) prodn. by immunocompetent cells.
CC The clone was obt'd. from a mouse liver cDNA library by PCR
CC amplification using primers (see also T32405-06) based on tryptic
CC peptides (R99561-62) of the protein. A DNA fragment based on
CC the cDNA clone was used to screen a human liver cDNA library,
CC leading to the isolation of a clone (T32402) coding for human mature
CC IFN-gamma inducer protein (R99558), a useful therapeutic agent.

XX Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;

Query Match 99.9%; Score 470.6; DB 17; Length 471;
Best Local Similarity 100.0%; Pred. No. 5.8e-124;
Matches 471; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 AACTTTGGCCGACTTCACGTGTACACACCGCAGTAATACGGAATATAATGACCAAGTCTC 60
Db 1 aactttggccgacttcactgtacacacgcagtaatacgaataataacccaagtctc 60
QY 61 TTCGTGACAAAGACAGCCTGTGTGAGAGATATGACTGATATGATCAAAAGTGCAGT 120
Db 61 ttcgtgacaaagacagcctgtgtgagagatatgactgatattgatacaaaagtgcagt 120
QY 121 GAACCCGACAGCAGCTGATATATATACATGTAACAAGACAGTGAAGTGAAGAGACTGGCT 180
Db 121 gaacccgacagcagctgataatacatatgatacaagacagtgaaagagagactgct 180
QY 181 GTGACCCCTCTGTGAGAGATAGTAAAYGTCTACCCCTCTCTGTAAGAACAAAGATCAT 240
Db 181 gtgacctctctgtgagagatagtaaaaygtctacctctctgtaagaacaagatcat 240
QY 241 TCCTTTGAGGAATGATCCACCTGAAAATATTGATGATATACAAAGTGTCTCATATTC 300
Db 241 tcctttgaggaatgatccacctgaaaatttgatgatatacaaaagtgtcatattc 300
QY 301 TTTGAGAAACGTTTCCAGACACACAAGATGAGTTTGAATCTTCACTGTATGAGGA 360
Db 301 tttagaaacgtttccagacacacaagatgagtttgaatcttcaactgtatgaagga 360
QY 361 CACTTCTTGTGCTGCCAAAAGAGATGATGCTTTCAAACTCATTTCTGAAAAAAGGAT 420
Db 361 cacttcttgtgctgccaaaagagatgatgctttcaaaactcatcttctgaaaaaagat 420
QY 421 GAAAAATGGGATTAATCTGTAATGTTCACTCTCACTAATTTACATCAAAAGT 471
Db 421 gaaaatgggatataatctgtaatgttcaactctcaactaactaactcaaaagt 471

RESULT 2
T16224 standard; cDNA to mRNA; 471 BP.

XX T16224;

DT 02-SEP-1996 (first entry)

DE Interferon gamma production inducer protein coding sequence.

KW Interferon gamma; inducer; IFNgamma; immunocompetent cell; antiviral;
KW antitumour; antiseptic; immunoregulatory; platelet-increasing agent;
KW therapy; prevention; condyloma acuminatum; renal cancer; brain cancer;
KW granuloma; mycosis fungoides; rheumatism; allergy; cytotoxicity; AIDS;
KW killer T-cell; interleukin-2; IL-2; tumour necrosis factor; TNF;
KW adoptive immunotherapy; monoclonal antibody; ds.

OS Mus musculus.

XX EP692536-A2.

XX 17-JAN-1996.

XX 13-JUL-1995; 95EP-0304906.

XX 10-FEB-1995; 95JP-0045057.

XX 14-JUL-1994; 94JP-0184162.

(HAYB) HAYASHIBARA SEIBUTSU KAGAKU.

XX Kohno K, Kunikata T, Kurimoto M, Okamura H, Taniguchi M;

XX Tanimoto T, Toriue K;

XX WPI; 1996-070177/08.

XX P-PSDB; R92506.

PT protein that induces gamma interferon prodn. in immuno:competent
PT cells - used e.g. as antiviral or antitumour agent, also induces
PT cytotoxicity of killer cells

XX Claim 4; Page 22-23; 30pp; English.

CC This sequence represents the coding sequence for the interferon gamma
CC (IFNgamma) inducer protein of the invention. The encoded protein induces
CC IFNgamma production in immunocompetent cells. The protein is useful as
CC an antiviral, antitumour, antiseptic, immunoregulatory and
CC platelet-increasing agent. It can be used for treating or preventing
CC AIDS, condyloma acuminatum, renal or brain cancer, granuloma, mycosis
CC fungoides, rheumatism and allergy. The protein can also be used to
CC induce IFNgamma production in cultured cells. The IFNgamma inducer
CC strongly induces cytotoxicity of killer T-cells and when used with
CC interleukin-2 (IL-2) and tumour necrosis factor (TNF), may improve the
CC effect (or reduce side effects) of adoptive immunotherapy in tumours.
CC This sequence can be used to produce the protein, which can then be
CC purified (or assayed) using monoclonal antibodies.

XX Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;

Query Match 99.9%; Score 470.6; DB 17; Length 471;
Best Local Similarity 100.0%; Pred. No. 5.8e-124;
Matches 471; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 AACTTTGGCCGACTTCACGTGTACACACCGCAGTAATACGGAATATAATGACCAAGTCTC 60
Db 1 aactttggccgacttcactgtacacacgcagtaatacgaataataacccaagtctc 60
QY 61 TTCGTGACAAAGACAGCCTGTGTGAGAGATATGACTGATATGATCAAAAGTGCAGT 120
Db 61 ttcgtgacaaagacagcctgtgtgagagatatgactgatattgatacaaaagtgcagt 120
QY 121 GAACCCGACAGCAGCTGATATATATACATGTAACAAGACAGTGAAGTGAAGAGACTGGCT 180
Db 121 gaacccgacagcagctgataatacatatgatacaagacagtgaaagagagactgct 180
QY 181 GTGACCCCTCTGTGAGAGATAGTAAAYGTCTACCCCTCTCTGTAAGAACAAAGATCAT 240
Db 181 gtgacctctctgtgagagatagtaaaaygtctacctctctgtaagaacaagatcat 240
QY 241 TCCTTTGAGGAATGATCCACCTGAAAATATTGATGATATACAAAGTGTCTCATATTC 300
Db 241 tcctttgaggaatgatccacctgaaaatttgatgatatacaaaagtgtcatattc 300
QY 301 TTTGAGAAACGTTTCCAGACACACAAGATGAGTTTGAATCTTCACTGTATGAGGA 360
Db 301 tttagaaacgtttccagacacacaagatgagtttgaatcttcaactgtatgaagga 360
QY 361 CACTTCTTGTGCTGCCAAAAGAGATGATGCTTTCAAACTCATTTCTGAAAAAAGGAT 420
Db 361 cacttcttgtgctgccaaaagagatgatgctttcaaaactcatcttctgaaaaaagat 420

QY 421 GAAATGGGATAAATCTGTAATGTTCACTCTCACTTAACCTTACATCAAGT 471
|||||
Db 421 gaaatgggataaactctgtatgtcactctcaactaactacatcaagaat 471

RESULT 3
T60536
ID T60536 standard; cDNA to mRNA; 471 BP.
XX
AC T60536;
XX
DT 26-JAN-1998 (first entry)
XX
DE Mouse interferon-gamma inducer cDNA.
XX
KW Interferon-gamma, IFN-gamma; antiviral; antineoplastic; radiotherapy;
KW immunoregulatory; antitumour agent; chemotherapy; leukopenia;
KW thrombocytopenia; immunocompetent cell; asthma; hayfever;
KW rheumatism; interleukin; killer cell; ds.
XX
OS Mus musculus.
XX
FH Key Location/Qualifiers
FT mat_peptide 1..471
FT /*tag= a
FT /product= interferon gamma inducer

EP767178-A1.
XX
PD 09-APR-1997.
XX
PF 26-SEP-1996; 96EP-0306997.
XX
PR 20-SEP-1996; 96JP-0269105.
PR 26-SEP-1995; 95JP-0270725.
PR 29-FEB-1996; 96JP-0067434.
XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI Akita K, Fujii M, Kurimoto M, Nukada Y, Tanimoto T;
XX
DR WPI; 1997-205381/19.
DR P-PSDB; W15704.
XX
PT Human protein that induces interferon-gamma prodn. in
PT immuno:competent cells - useful for adoptive immuno:therapy of
PT tumours and as antimicrobial agent etc.
XX
PS Disclosure; Page 22; 26pp; English.
XX
CC The present sequence encodes a novel protein from mouse liver cells,
CC which induces interferon-gamma (IFN gamma) production in immunocompetent
CC cells. This protein enhances cytotoxicity of killer cells and induces
CC their formation. It is used as an antineoplastic agent for antitumour
CC immunotherapy, an antiviral (including anti-AIDS) or antibacterial agent,
CC and in the treatment of atopic or immune system diseases, e.g. asthma,
CC hayfever or rheumatism. When formulated with interleukin-3, it is also
CC used to treat leukopenia and thrombocytopenia associated with
CC radiotherapy or chemotherapy of leukaemia and other cancers. When used
CC in antitumour immunotherapy, this novel protein significantly improves
CC the immunotherapeutic effect of interleukin-2 (IL-2), compared with use
CC of IL-2 alone, either when administered to the patient (before
CC administration of IL-2) or by addition to the medium in which cells
CC (intended for return to the patient) are being grown.
XX
SO Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;

Query Match 99.9%; Score 470.6; DB 18; Length 471;
Best Local Similarity 100.0%; Pred. No. 5.8e-124;
Matches 471; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 AACTTGGCCGACTTTCACCTGTACAAACCGCAGTAATACGGAATATTAATGACCAAGTCTC 60
|||||
Db 1 aacttggccgacttcaactgttacaaccgcagtaataacggaatataaagaccaagttctc 60

QY 61 TTGCTGACAAAAGACAGCCCTGTGTTGAGAGATATGACTGATATTTGATCAAAAGTCCAGT 120
|||||
Db 61 ttctgtgacaaaagacagccctgttgcagagatatagtactgtatgtacaaagtcagct 120

QY 121 GAACCCGACGACGACTGATATATATACATGTACAAAGACAGTGAAGTGAAGAGACTGGCT 180
|||||
Db 121 gaacccgacgacgactgataataacatgtacaaagacagtgaaagtaagagactggct 180

QY 181 GTGACCCCTCTGTGTAAGGATAGTAAAYGTCTACCCCTCTCCCTGTAAGAACAGATCATT 240
|||||
Db 181 gtgacctctctgtgaagatagtaaaaygtctacctctcctgtgaagacaagatcat 240

QY 241 TCCCTTGGAGAAATGGATCCACCTGAAAATATTTGATGATATACAAAGTGAATCTCATATTG 300
|||||
Db 241 tccttggagaaatggatccacctgaaaatatgtgatatacaaaagtgatctcatattc 300

QY 301 TTTCAGAAACGTTGTTCCAGGACACACAAAGATGAGTTTGAATCTTCACTGTATGAAGCA 360
|||||
Db 301 ttccagaaacgtgttccagggacacacaagaatgagtttgaatcttcacctgtatgaagca 360

QY 361 CACTTTCCTTGGCTTGCCAAAAGGAGATGATGCTTTCAAACTCATTTGAAAAAAGAGAT 420
|||||
Db 361 cacttctctgttgccaaaaggaagatgatgctttcaaaactcatcttgaaaaaagat 420

QY 421 GAAATGGGATAAATCTGTAATGTTCACTCTCACTTAACCTTACATCAAGT 471
|||||
Db 421 gaaatgggataaactctgtatgttcaactctcaactaactacatcaagaat 471

RESULT 4
T80210
ID T80210 standard; cDNA to mRNA; 471 BP.
XX
AC T80210;
XX
DT 15-OCT-1997 (first entry)
XX
DE Murine protein for induction of interferon-gamma.
XX
KW Interferon-gamma; immunocompetent cell; malignant tumour;
KW viral disease; bacterial infection; immune disease; ds.
XX
OS Mus musculus.
XX
FH Key Location/Qualifiers
FT CDS 1..471
FT /*tag= a
FT /transl_except= pos:208..210, aa:Xaa
FT /note= "No stop codon given"

JP09157180-A.
XX
PD 17-JUN-1997.
XX
PF 24-JAN-1996; 96JP-0028722.
XX
PR 04-OCT-1995; 95JP-0279906.
PR 10-MAR-1995; 95JP-0078357.
PR 29-SEP-1995; 95JP-0274988.
XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
XX
DR WPI; 1997-369391/34.
DR P-PSDB; W24262.
XX
PT A drug containing a polypeptide which induces interferon-gamma -
PT useful for treating e.g. malignant tumours, viral, bacterial or
PT immune diseases
XX

PS Disclosure; Page 10-11; 12pp; Japanese.

XX
CC This sequence encodes a protein which induces interferon-gamma
CC production in immunocompetent cells. This protein may be used as
CC the major component in a drug for the prevention and treatment of
CC e.g. malignant tumours, viral diseases, bacterial infections and
CC immune diseases.

XX
SQ Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;

Query Match 99.9%; Score 470.6; DB 18; Length 471;
Best Local Similarity 100.0%; Pred. No. 5.8e-124;
Matches 471; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 AACTTGGCCGACTTCACTGTACAAACCGCAATAATACGAATATAAATGACCAAGTCTC 60
Db 1 aacttggccgacttcaactgtacacacgcgtaatacgaataataatgaccaagtctc 60
QY 61 TTCTGTGACAAAGACAGCCCTGTGTCGAGGATATGACTGATATTCATCAAGTGCAGT 120
Db 61 ttctgtgacaaagacagccctgtgttcgaggatatagtactgatatgacaaagtgcagt 120
QY 121 GAACCCAGACGACGACTGATATATATACAAAGACAGTGAAGTGAAGGACTGGCT 180
Db 121 gaacccagacgacgactgataataatacagaaagacagtgaaagagactggct 180
QY 181 GTGACCCCTCTCTGTGAAGGATAGTAAAYGTCTACCCCTCTCTGTAAGAACAGATCAT 240
Db 181 gtgacctctctgtgaagagatagtaaaaygtctacctctctgtgaagaacagatcatt 240
QY 241 TCCTTTGAGGAATGGATCCACCTGAAATATTTGATGATATACAAAGTGTCTCATATTC 300
Db 241 tcctttgaggaatgataccacctgaataatattgatatacaaaagtgtctcatattc 300
QY 301 TTTGAGAAACGCTGTCCAGACACAAAGATGAGTTGAACTTCTCACTGTATGAAGGA 360
Db 301 tttagaagaacgtgtccagacacaagaatgagttgaattcttcaactgtatgaagga 360
QY 361 CACTTCTGCTTGCCAAAAGAGATGATGCTTTCAAACTTCATCTGAAAAAAAAGGAT 420
Db 361 caacttctgtcttgccaaaagagatgatgctttccttcaacttctgaaaaaaggat 420
QY 421 GAAATGGGATAAATCTGTAATGTTCACTCTCACTAATTAATCAATCAAAAGT 471
Db 421 gaaatgggataaatctgtaatgttcaactctcactaacttaacatcaaaagt 471

RESULT 5

ID V48227 standard; cDNA to mRNA; 471 BP.

XX V48227;

DT 16-NOV-1998 (first entry)

DE Mouse interleukin 18 gene.

XX
KW Mouse; interleukin-18; IL-18; osteoclast; hypercalcaemia; osteopenia; ds;
KW osteoclastoma Behcet's syndrome; osteosarcoma; arthropathy; osteoporosis;
KW chronic rheumatoid arthritis; deformity ositis; primary hyperthyroidism.

OS Mus sp.

XX
FH Key Location/Qualifiers
FT CDS 1..471

FT /*tag= a
FT /product= "interleukin 18"
FT /note= "No stop or start codon given"

PN EP861663-A2.

XX 02-SEP-1998.

XX
PF 24-FEB-1998; 98EP-0301352.

XX
PR 25-FEB-1997; 97JP-0055468.

XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.

XX
PI Gillespie MT, Horwood NJ, Kurimoto M, Udagawa N;

XX
DR WPI; 1998-448964/39.

DR P-PSDB; W77078.

PT Use of interleukin-18 to inhibit osteoclast formation - in treatment
PT of e.g. hypercalcaemia, osteoclastoma, Behcet's syndrome,
PT osteosarcoma, chronic rheumatoid arthritis, deformity ositis,
PT primary hyperthyroidism and osteoporosis

PS Disclosure; Page 29; 56pp; English.

CC Interleukin-18 (IL-18) or a functional equivalent can be used for
CC inhibition of osteoclast formation. IL-18 is used for treating or
CC preventing osteoclast-related diseases e.g. hypercalcaemia, osteoclastoma
CC Behcet's syndrome, osteosarcoma, arthropathy, chronic rheumatoid
CC arthritis, deformity ositis, primary hyperthyroidism, osteopenia and
CC osteoporosis.

XX
SQ Sequence 471 BP; 162 A; 91 C; 92 G; 126 T; 0 other;

Query Match 99.9%; Score 470.6; DB 19; Length 471;
Best Local Similarity 99.8%; Pred. No. 5.8e-124;
Matches 470; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 AACTTGGCCGACTTCACTGTACAAACCGCAATAATACGAATATAAATGACCAAGTCTC 60
Db 1 aacttggccgacttcaactgtacacacgcgtaatacgaataataatgaccaagtctc 60
QY 61 TTCTGTGACAAAGACAGCCCTGTGTCGAGGATATGACTGATATTCATCAAGTGCAGT 120
Db 61 ttctgtgacaaagacagccctgtgttcgaggatatagtactgatatgacaaagtgcagt 120
QY 121 GAACCCAGACGACGACTGATATATATACAAAGACAGTGAAGTGAAGGACTGGCT 180
Db 121 gaacccagacgacgactgataataatacagaaagacagtgaaagagactggct 180
QY 181 GTGACCCCTCTCTGTGAAGGATAGTAAAYGTCTACCCCTCTCTGTAAGAACAGATCAT 240
Db 181 gtgacctctctgtgaagagatagtaaaaygtctacctctctgtgaagaacagatcatt 240
QY 241 TCCTTTGAGGAATGGATCCACCTGAAATATTTGATGATATACAAAGTGTCTCATATTC 300
Db 241 tcctttgaggaatgataccacctgaataatattgatatacaaaagtgtctcatattc 300
QY 301 TTTGAGAAACGCTGTCCAGACACAAAGATGAGTTGAACTTCTCACTGTATGAAGGA 360
Db 301 tttagaagaacgtgtccagacacaagaatgagttgaattcttcaactgtatgaagga 360
QY 361 CACTTCTGCTTGCCAAAAGAGATGATGCTTTCAAACTTCATCTGAAAAAAAAGGAT 420
Db 361 caacttctgtcttgccaaaagagatgatgctttccttcaacttctgaaaaaaggat 420
QY 421 GAAATGGGATAAATCTGTAATGTTCACTCTCACTAATTAATCAATCAAAAGT 471
Db 421 gaaatgggataaatctgtaatgttcaactctcactaacttaacatcaaaagt 471

RESULT 6

ID Z36923 standard; cDNA to mRNA; 471 BP.

XX Z36923;

DT 13-MAR-2000 (first entry)

XX DE DNA encoding a protein that induces IFN-gamma production.
XX KW Mouse; interferon gamma production; IFN-gamma; immunocompetent cell;
KW antiviral; immunoregulatory; antigen; mitogen;
KW IFN-gamma susceptible disease; antibacterial; antitumour;
KW blood platelet enhancing agent; hepatitis; herpes syndrome; condyloma;
KW AIDS; bacterial disease; candidiasis; malaria; solid malignant tumour;
KW renal cancer; mycosis fungoides; chronic granulomatous disease;
KW blood cell malignant tumour; adult T cell leukaemia;
KW chronic myelogenous leukaemia; malignant leukaemia; immune disease;
KW allergy; rheumatism; ds.
XX OS Mus sp.
XX FH Key Location/Qualifiers
FT mat_peptide 1..471
FT /tag= a
FT /transl_except= (pos: 208..210, aa: Xaa)
FT /note= "Xaa is not specified"
XX PN EP962531-A2.
XX PD 08-DEC-1999.
XX PF 10-NOV-1995; 99EP-0104104.
XX PR 15-NOV-1994; 94JP-0304203.
PR 23-FEB-1995; 95JP-0058240.
PR 10-MAR-1995; 95JP-0078357.
PR 18-SEP-1995; 95JP-0262062.
PR 29-SEP-1995; 95JP-0274988.
PR 10-NOV-1995; 95EP-0308055.
XX PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
XX PI Ushio S, Torigoe K, Tanimoto T, Okamura H;
XX DR WPI: 2000-064289/06.
DR P-PSDB; Y53905.
XX PT Novel polypeptides used in the treatment of interferon-gamma
PT susceptible diseases -
XX PS Disclosure; Page 3; 42pp; English.
XX CC The present sequence encodes a murine protein that induces interferon
CC (IFN)-gamma production by immunocompetent cells. IFN-gamma is a
CC protein which has antiviral, antioncotic and immunoregulatory activities,
CC and is produced by immunocompetent cells stimulated with antigens or
CC mitogens. A probe derived from the present sequence was used to isolate
CC the corresponding human protein from human liver cells. The protein of
CC the invention is used to treat IFN-gamma susceptible diseases, and also
CC have use as a antiviral agent, antibacterial agent, antitumour agent,
CC immunoregulatory agent and blood platelet enhancing agent. Diseases
CC which can be treated with the protein include viral diseases such as
CC hepatitis, herpes syndrome, condyloma, and AIDS; bacterial diseases
CC such as Candidiasis and malaria; solid malignant tumours such as renal
CC cancer, mycosis fungoides, and chronic granulomatous disease; blood
CC cell malignant tumours such as adult T cell leukaemia, chronic
CC myelogenous leukaemia, and malignant leukaemia; and immune diseases
CC such as allergy and rheumatism.
XX SQ Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;
Query Match 99.9%; Score 470.6; DB 21; Length 471;
Best Local Similarity 100.0%; Pred. No. 5.8e-124;
Matches 471; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 AACTTGGCCGACCTGATCAACCGCAGTAATACGAATATAATGACCAAGTCTC 60
Db 1 aactltggccgacttcactgtacaacgcagtaataatgacaaatgaccagttctc 60

QY 61 TTCGTTGACAAAAGACAGCCTGTGTTGAGGATATGACTGATATGATCAAGTGCCAGT 120
Db 61 ttctgtgacaaaagacagcctgtgttcgagagatatgactgatatgtcaaaagtgcag 120
QY 121 GAACCCGACAGCAGACTGATATATACATGTACAAAAGACAGTGAAGAGGACTGGCT 180
Db 121 gaacccgagaccagactgataataatcatgtacaagaacagtgaaagagactgct 180
QY 181 GTGACCCCTCTCTGTGAGAGGATAGTAAAYGTCTACCCCTCTCCTGTAGAACAAAGATCAT 240
Db 181 gtgaccctctctgtgaagatagtaaaaygtctaccctctcctgtgaagaacagatcat 240
QY 241 TCCTTTGAGGAAATGGATCCACCTGAAATATATGATGATATACAAAGTGATCTCATATTC 300
Db 241 tccttgyagaaatgataccacctgaaatatgtatgatacaaaagtgtcatatlc 300
QY 301 TTTGAGAAACGTGTTCAGGACACACAAAGATGAGTTTGAATCTTCACTGTATGAAGCA 360
Db 301 ttccagaaaacgtgttccagagacacaacaagatgagtttgaatcttcactgtatgaagca 360
QY 361 CACTTTCTTGCTTGCCAAAAGGAAGATGATGCTTTCAACCTCATTTGAAAAAAGAGAT 420
Db 361 cacttcttgcttgccaaaaggaagatgatagtcttcaactcatcttgaaaaaagat 420
QY 421 GAAAAATGGGATAAATCTGTAATGTTCACCTTCACCTAACCTTACATCAAAAGT 471
Db 421 gaaaatgggataaatctgtaatgttcacttcactcactcaactcaactcaactcaactcaact 471
RESULT 7
V32755
ID V32755 standard; cDNA; 570 BP.
XX AC V32755;
XX DT 25-SEP-1998 (first entry)
XX DE Wild-type mouse interferon-gamma inducing factor cDNA.
XX KW Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW antitumour agent; antiviral agent; antimicrobial agent; tumour; MIGIF;
KW hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX OS Mus sp.
XX FH Key Location/Qualifiers
FT 5'UTR 1..15
FT /tag= a
FT CDS 16..558
FT /tag= b
FT /product= "Immature mouse IGIF"
FT sig_peptide 16..84
FT /tag= C
FT /note= "This sequence claimed by the inventors
FT under claim 11 in the specification"
FT mat_peptide 85..555
FT /tag= d
FT 3'UTR 559..570
FT /tag= e
PN EP845530-A2.
XX PD 03-JUN-1998.
XX PF 28-NOV-1997; 97EP-0309632.
XX PR 14-NOV-1997; 97JP-0329715.
PR 29-NOV-1996; 96JP-0333037.
PR 21-JAN-1997; 97JP-0020906.
XX PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.

XX Kurimoto M, Okamoto I, Yamamoto K;
XX
DR WPI; 1998-288747/26.
DR P-PSDB; W48960.
XX
PT Mutants of Interferon-gamma inducing polypeptide - useful as
PT antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS Claim 11; pages 38-39; 59pp; English.
XX
CC The present sequence represents the wild-type mouse interferon-gamma
CC inducing factor (mIGIF) cDNA. The invention provides for mutant mouse
CC and human interferon-gamma inducing factors in which one or more
CC cysteine residues are replaced with different residues at or away from
CC the consensus sequences shown in W48956-W48958. The mutant mIGIFs are
CC capable of stimulating immunocompetent cells for the production of
CC interferon-gamma and are claimed to be less toxic, more active and
CC stable than the corresponding wild type interferon-gamma inducing
CC factor. The mutant mIGIFs are also claimed to enhance killer cell
CC cytotoxicity and/or induce killer cell formation, and may therefore
CC be useful as antitumour agents, antitumour immunotherapeutics, antiviral
CC agents and antimicrobial agents. The mutant mIGIFs are also claimed
CC to be useful for treating hepatitis, acquired immunodeficiency syndrome
CC (AIDS), malaria, tuberculosis, solid malignant tumours (e.g. renal
CC carcinoma), rheumatism, osteoporosis and thrombopenia caused by
CC radiation- and chemo-therapy.
XX
SQ Sequence 570 BP; 175 A; 123 C; 121 G; 151 T; 0 other;

Query Match 99.9%; Score 470.6; DB 19; Length 570;
Best Local Similarity 99.8%; Pred. No. 6.2e-124;
Matches 470; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 AACTTTGGCCGACTTCACTGTACACCGCAGTAATACGAATATAATGACCAAGTCTTC 60
Db ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 85 aactttggccgacttcaactgttacaaccgcagtaatacgaataataatgaccaagtcttc 144
QY 61 TTCGTTGACAAAGACAGCCTGTGTTCCAGGATATGACTGATATGATCAAAAGTGGCAGT 120
Db ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 145 ttcgttgacaaaagacagcctgtgttcgaagatatgactgatattgatacaaaagtgcagt 204
QY 121 GAACCCCGACAGCAGACTGATATATATACATGTACAAGACAGTGAAGAGGAGCTGGCT 180
Db ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 205 gaaccccgacagcagactgataataatgatacaaaagcagtgaaagagagactgctc 264
QY 181 GTGACCCCTCTCTGTGAAGGATAGTAAATGCTCTACCCCTCTCTGTAAGAACAGATCATT 240
Db ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 265 gtgacctctctgtgaagatagtaaatgtctaccctctctgttaagaacaagatcatc 324
QY 241 TCCTTTGAGGAATGATCCACCTGAAATATATGATGATATACAAAGTGATCTCATATTC 300
Db ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 325 tcctttgaggaatgataccacctgaaaataatgatatatacaaaagtcatatctc 384
QY 301 TTCAGAAACGCTGTCCAGACACACAGATGAGAGTTGAATCTTCACTGTATGAAGGA 360
Db ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 385 ttccagaaaacgtgttcagagacacaagaatgagattgaaacttcaactgtatgaagga 444
QY 361 CACTTTCCTGTGCGCAAAAGGAGAGATGCTTTCAAACTCATTTGAAAAAAAAGGAT 420
Db ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 445 caacttctgtctgccaagaagatgacttccaactcatctcgtaaaaaaagagt 504
QY 421 GAAAAATGGGATAAATCTGTAATGTTCACTCTCACTAACTTACATCAAAAGT 471
Db ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 505 gaaatgggataaatctgtaatgttcaactctcactaactacatcaaaagt 555

RESULT 8
ID V32633 standard; cDNA; 471 BP.
XX V32633;
AC V32633;

XX 25-SEP-1998 (first entry)
DT
XX
DE Mutant mouse interferon-gamma inducing factor cDNA mIGIF/MUT12.
DE
XX
KW Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW antitumour agent; antiviral agent; antimicrobial agent; tumour; mIGIF;
KW hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX
OS Mus sp.
OS Synthetic.
XX
FH Key Location/Qualifiers
FH CDS 1..471
FT /*tag= a
FT /product= "Mutant human interferon-gamma inducing
FT factor mIGIF/MUT12"
FT /note= "CDS does not contain a stop codon"
FT mutation 373..375
FT /*tag= b
FT /note= "changed from TGC in wild-type to AGC in
FT mutant"
XX
PN EP845530-A2.
XX
PD 03-JUN-1998.
XX
PE 28-NOV-1997; 97EP-0309632.
XX
PR 14-NOV-1997; 97JP-0329715.
PR 29-NOV-1996; 96JP-0333037.
PR 21-JAN-1997; 97JP-0020906.
XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI Kurimoto M, Okamoto I, Yamamoto K;
PI
XX
DR WPI; 1998-288747/26.
DR P-PSDB; W48969.
XX
PT Mutants of interferon-gamma inducing polypeptide - useful as
PT antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS Claim 10; page 50; 59pp; English.
XX
CC The present sequence represents the mutant mouse interferon-gamma
CC inducing factor cDNA mIGIF/MUT12. The wild-type mouse interferon-gamma
CC factor (mIGIF) cDNA sequence is shown in V32755. The invention provides
CC for mutant human and mouse interferon-gamma inducing factors in which one
CC or more cysteine residues are replaced with different residues at or away
CC from the consensus sequences shown in W48956-W48958. The mutant mIGIFs
CC are capable of stimulating immunocompetent cells for the production of
CC interferon-gamma and are claimed to be less toxic, more active and
CC stable than the corresponding wild type mIGIF factor. The mutant mIGIFs
CC are also claimed to enhance killer cell cytotoxicity and/or induce killer
CC cell formation, and may therefore be useful as antitumour agents,
CC antitumour immunotherapeutics, antiviral agents and antimicrobial agents.
CC The mutant mIGIFs are also claimed to be useful for treating hepatitis,
CC acquired immunodeficiency syndrome (AIDS), malaria, tuberculosis, solid
CC malignant tumours (e.g. renal carcinoma), rheumatism, osteoporosis and
CC thrombopenia caused by radiation- and chemo-therapy.
XX
SQ Sequence 471 BP; 163 A; 91 C; 92 G; 125 T; 0 other;

Query Match 99.6%; Score 469; DB 19; Length 471;
Best Local Similarity 99.6%; Pred. No. 1.6e-123;
Matches 469; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
QY 1 AACTTTGGCCGACTTCACTGTACAAACCGCAGTAATACGAATATAATGACCAAGTCTTC 60
Db ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 1 aactttggccgacttcaactgttacaaccgcagtaatacgaataataatgaccaagtcttc 60

```
QY 61 TTGTTGACAAAAGACGCTGTGTTGAGGATATGACTGATATGATCAAGTGCAGT 120
    |||
Db 61 ttctgtgacaaagacagcctgtgttcgagatgactgatatgtatcgaagtgcag 120
QY 121 GAACCCGAGACGAGCTGATTAATATCATGTACAAAAGACAGTGAAGAGCTGGCT 180
    |||
Db 121 gaacccgagaccagactgataatacatgtacaaagacagtgaagagagactgct 180
QY 181 GTGACCCCTCTCTGTGAAGGATAGTAAAYGTCATCCCTCTCTGTAAGACAGATCAT 240
    |||
Db 181 gtgacctctctgtgaagagatagtaaaatgtctaccctctctgtgaagacagatcat 240
QY 241 TCCTTTGAGGAAATGATCCACCTGAAAATATGATGATATACAAAAGTATCTCATATTC 300
    |||
Db 241 tccttgaagaaatgataccacagaaatattgatgatatacaaaagtgcataatc 300
QY 301 TTTCAGAAAACGTGTTCCAGACACACAGATGAGTTGAATCTTCACCTGATGAAGGA 360
    |||
Db 301 ttccagaaaacgtgtccagagacacaaagatgagttgaatcttcactglatgaaga 360
QY 361 CACTTCTGCTTGCCAAAAGAGATGATGCTTTCAACATCATTTCTGAAGAAAAAGCAT 420
    |||
Db 361 cacttctgtcagcaaaagagatgagttccttcaactcatctcgaaaaaaagat 420
QY 421 GAAAATGGGATAAATCTGTAATGTTCACTCTCACTTAACCTTACATCAAAAGT 471
    |||
Db 421 gaaaatgggataaactgtlaatgttcactcctaactaactaactcaaaagt 471

RESULT 9
V32632 standard; cDNA; 471 BP.
XX
AC V32632;
XX
DT 25-SEP-1998 (first entry)
XX
DE Mutant mouse interferon-gamma inducing factor cDNA mIGIF/MUT11.
XX
KW Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW antitumour agent; antiviral agent; antimicrobial agent; tumour; mIGIF;
KW hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX
OS Mus sp.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT CDS 1..471
FT FT /*tag= a
FT FT /product= "Mutant human interferon-gamma inducing
FT FT factor mIGIF/MUT11"
FT FT /note= "CDS does not contain a stop codon"
FT FT 19..21
FT FT /*tag= b
FT FT /note= "changed from TGT in wild-type to GCT in
FT FT mutant"
PN EP845530-A2.
XX
PD 03-JUN-1998.
XX
PF 28-NOV-1997; 97EP-0309632.
XX
PR 14-NOV-1997; 97JP-0329715.
PR 29-NOV-1996; 96JP-0333037.
PR 21-JAN-1997; 97JP-0020906.
XX
PA (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI Kurimoto M, Okamoto I, Yamamoto K;
XX
```

```
DR WPI: 1998-288747/26.
P-PSDB; W48968.
XX
PT Mutants of interferon-gamma inducing polypeptide - useful as
PT antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS Claim 10; pages 49-50; 59pp; English.
XX
CC The present sequence represents the mutant mouse interferon-gamma
CC inducing factor cDNA mIGIF/MUT11. The wild-type mouse interferon-gamma
CC factor (mIGIF) cDNA sequence is shown in V32755. The invention provides
CC for mutant human and mouse interferon-gamma inducing factors in which one
CC or more cysteine residues are replaced with different residues at or away
CC from the consensus sequences shown in W48956-W48958. The mutant mIGIFs
CC are capable of stimulating immunocompetent cells for the production of
CC interferon-gamma and are claimed to be less toxic, more active and
CC stable than the corresponding wild type mIGIF factor. The mutant mIGIFs
CC are also claimed to enhance killer cell cytotoxicity and/or induce killer
CC cell formation, and may therefore be useful as antitumour agents,
CC antitumour immunotherapeutics, antiviral agents and antimicrobial agents.
CC The mutant mIGIFs are also claimed to be useful for treating hepatitis,
CC acquired immunodeficiency syndrome (AIDS), malaria, tuberculosis, solid
CC malignant tumours (e.g. renal carcinoma), rheumatism, osteoporosis and
CC thrombopenia caused by radiation- and chemo-therapy.
XX
SQ Sequence 471 BP; 162 A; 92 C; 92 G; 125 T; 0 other;

Query Match 99.2%; Score 467.4; DB 19; Length 471;
Best Local Similarity 99.4%; Pred. No. 4.6e-123;
Matches 468; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 AACTTTGGCCGACTTTCACCTGATACACCGCAGTAAATACGAATATAATGACCAGTTCTC 60
    |||
Db 1 aacttggccgacttccagctacacacgcaglaaataaataagacaaagtctc 60
QY 61 TTGCTGACAAAAGACAGCCTGTGTTCCAGGATATGACTGATATTTATCAAGTGCAGT 120
    |||
Db 61 ttctgtgacaaaagacagcctgtgttcgagagatagatgactgatatgacaaagtgcag 120
QY 121 GAACCCGAGACGAGCTGATTAATATGATGATATGACAAAAGATGAAGAGCTGGCT 180
    |||
Db 121 gaacccgagaccagactgataatacatgtacaaagacagtgaaglaagagactgct 180
QY 181 GTGACCCCTCTCTGTGAAGGATAGTAAAYGTCATCCCTCTCTGTAAGACAGATCAT 240
    |||
Db 181 gtgacctctctgtgaagagatagtaaaatgtctaccctctctgtgaagacagatcat 240
QY 241 TCCTTTGAGGAAATGATCCACCTGAAAATATGATGATATACAAAAGTATCTCATATTC 300
    |||
Db 241 tccttgaagaaatgataccacagaaatattgatgatatacaaaagtgcataatc 300
QY 301 TTTCAGAAAACGTGTTCCAGACACACAGATGAGTTGAATCTTCACCTGATGAAGGA 360
    |||
Db 301 ttccagaaaacgtgtccagagacacaaagatgagttgaatcttcactglatgaaga 360
QY 361 CACTTCTGCTTGCCAAAAGAGATGATGCTTTCAACATCATTTCTGAAGAAAAAGCAT 420
    |||
Db 361 cacttctgtcagcaaaagagatgagttccttcaactcatctcgaaaaaaagat 420
QY 421 GAAAATGGGATAAATCTGTAATGTTCACTCTCACTTAACCTTACATCAAAAGT 471
    |||
Db 421 gaaaatgggataaactgtlaatgttcactcctaactaactaactcaaaagt 471

RESULT 10
V20875 standard; cDNA; 722 BP.
XX
AC V20875;
XX
DT 28-JUL-1998 (first entry)
XX
```

DE Nucleotide sequence encoding a rat interferon-gamma inducing factor.
XX
KW Rat interferon-gamma inducing factor; IGIF; interleukin-18; IL-18;
IL-18-alpha; transformation; antibody; probe; hybridisation; ss.
XX
OS Rattus sp.
XX
FH Key Location/Qualifiers
FT CDS 1..585
FT sig_peptide /*tag= a
FT /product= "interferon-gamma inducing factor"
FT 1..108
FT /*tag= b
PN WO9810072-A1.
PD 12-MAR-1998.
XX
PF 08-SEP-1997; 97WO-US15891.
XX
PR 08-APR-1997; 97US-0043087.
PR 09-SEP-1996; 96US-0025141.
XX
PA (CORR) CORNELL RES FOUND INC.
XX
PI Conti B, Joh TH;
XX
DR WPI; 1998-193622/17.
DR P-PSDB; W53282.
XX
XX
PT Rat interferon-gamma inducing factors and related DNA - useful for
PT quantitating stress in a mammal
XX
PS Claim 4; Page 31; 47pp; English.
XX
CC This is the nucleotide sequence of the rat interferon-gamma inducing
CC factor (IGIF), also known as interleukin-18 (IL-18). It can be used
CC to transform a cell, which upon its expression can cause the cell to
CC produce rat IGIF, i.e. IL-18 or IL-18 alpha. The antibody to IGIF,
CC IGIF and probes derived from it, are useful for detection of IL-18 or
CC IL-18 alpha present in a sample. The amount of IL-18 or IL-18 alpha
CC in a sample can be used to quantitate stress in a mammal.
XX
SQ Sequence 722 BP; 252 A; 138 C; 140 G; 192 T; 0 other;
Query Match 85.1%; Score 400.6; DB 19; Length 722;
Best Local Similarity 91.8%; Pred. No. 4.1e-104;
Matches 434; Conservative 1; Mismatches 35; Indels 3; Gaps 1;
QY 2 ACTTTGGCCGACTTCACGTGTACAAACCGCAGTATATACGGAATATATAATGACCAAGTCTCT 61
DB 110 acttggcagacttcactgtacaaaccgcagtaatacagagcataaataagccaagtctct 169
QY 62 TCGTTGACAAAAGA---CAGCCTGTGTTGAGGATATGACTGATATGATCAAAAGTGCCA 118
DB 170 tcgtgacaaaagaaccgcctgtgtcgagacatgacctgatacgaccgaacagcca 229
QY 119 GTGAACCCAGACGACTGATATATATACAAAGACAGTGAAGTAAGAGGACTGG 178
DB 230 acgaatcccaagaccagactgataatataatgtacaaagatagtgaagtaagagactgg 289
QY 179 CTGTGACCCCTCTGTGTAAGGATAGTAATAAAGTCTACCCCTCTCTGTAAGAACAAGATCA 238
DB 290 ctgtgaccctatctgtgaagatggaagatgtctacctctcctgttaaaaaacaataca 349
QY 239 TTTCCTTGAAGGAATGCATCCACCTGAATAATATGATGATATACAAGTGCATCATAT 298
DB 350 ttcccttgaggaatgaatccacctgaataatattgatgataaaaaagtgatcctatat 409
QY 299 TCTTTGAGAAACGTGTTCCAGACACAAAGATGAGTTGAAATCTTCACTGTATGAAG 358
DB 410 tcttcagaacagtggtccagacacacaaaataagtaattgaatcttccctgtatgaag 469

QY 359 GACACTTCTCTGCTTGCSCAAAAGAGATGATGCTTTCAAACTCATCTGAAAAAAGG 418
DB 470 gacacttctagcttgccaaaagaagatgagcttccaactcgtttgaaaaggaag 529
QY 419 ATGAAATGGGATAAATCTGTAATGTTCACTCTCACTTAAGTACATCAAAAGT 471
DB 530 atgaaatgggataaatctgtaatgttcaacttactactacatacaaaagt 582
RESULT 11
V20876
ID V20876 standard; cDNA; 665 BP.
XX
AC V20876;
XX
DT 28-JUL-1998 (first entry)
XX
DE Nucleotide sequence encoding a rat interleukin-18-alpha.
XX
KW Rat interferon-gamma inducing factor; IGIF; interleukin-18; IL-18;
IL-18-alpha; transformation; antibody; probe; hybridisation; ss.
XX
OS Rattus sp.
XX
FH Key Location/Qualifiers
FT CDS 1..528
FT /*tag= a
FT /product= "interleukin-18-alpha"
XX
PN WO9810072-A1.
PD 12-MAR-1998.
XX
PF 08-SEP-1997; 97WO-US15891.
XX
PR 08-APR-1997; 97US-0043087.
PR 09-SEP-1996; 96US-0025141.
XX
PA (CORR) CORNELL RES FOUND INC.
XX
PI Conti B, Joh TH;
XX
DR WPI; 1998-193622/17.
DR P-PSDB; W53283.
XX
XX
PT Rat interferon-gamma inducing factors and related DNA - useful for
PT quantitating stress in a mammal
XX
PS Claim 7; Pages 32-333; 47pp; English.
XX
CC This is the nucleotide sequence of the rat interferon-gamma inducing
CC factor (IGIF) isoform, also known as interleukin-18-alpha
CC (IL-18-alpha). It can be used to transform a cell, which upon its
CC expression can cause the cell to produce rat IGIF, i.e. IL-18 or
CC IL-18 alpha. It is made by the deletion of 57 bases (360-417) from
CC V20875, a probable exon. The antibody to IGIF, IGIF and probes
CC derived from it, are useful for detection of IL-18 or IL-18 alpha
CC present in a sample. The amount of IL-18 or IL-18 alpha in a sample
CC can be used to quantitate stress in a mammal.
XX
SQ Sequence 665 BP; 229 A; 130 C; 132 G; 174 T; 0 other;
Query Match 59.4%; Score 279.8; DB 19; Length 665;
Best Local Similarity 80.1%; Pred. No. 5.5e-70;
Matches 379; Conservative 1; Mismatches 33; Indels 60; Gaps 2;
QY 2 ACTTTGGCCGACTTCACGTGTACAAACCGCAGTATATACGGAATATATAATGACCAAGTCTCT 61
DB 110 acttggcagacttcactgtacaaaccgcagtaatacagacataaatgacaaagtctct 169
QY 62 TCGTTGACAAAAGA---CAGCCTGTGTTGAGGATATGACTGATATATGATCAAAAGTCCA 118

Db	170	tcgltgacaaaagaacaccgcctgtgtctcgagacatgacctgatalcgaccgaacagcca	229
QY	119	GTGAACCCCCAGACACCAGACTGATTAATATACATGTACAAAGACAGTGAAGTAAGAGGACTCG	178
Db	230	agaatccccagaccagactgataataataatgttacaagaatagyaagtaagaagacttg	289
QY	179	CTGTGACCCCTCTCTGTGTGAAGATAGTAAAYGTCTWACCTCTCTCTGTGAAGCAAGATCA	238
Db	290	ctgtgacctatctgtggaagatggaagatgtctacccctctctgtlaaaaaacaaatca	349
QY	239	TTTCTTTTGAGGAATGATCCACCTGAAATATTGATGATATACAAAGTGATCTCATAT	298
Db	350	ttctccttg-----	358
QY	299	TCCTTCAGAAACGTGTTCACAGACACACAACAAGATGAGTTTGAACTCTCACGTATGAAG	358
Db	359	-----agaacgtlgtccagyacacacaacaaatlygaalttgaatctccctglatygaag	412
QY	359	GACACTTTCCTTGCTTGCCCAAAAGGAAGATGATGCTTTCACAACTATTTCTGAAAAAAAGG	418
Db	413	gacacttcttagcttgccaaaaagaagatgatgtcttcaaactcgttttgaaaaaagaag	472
QY	419	ATGAAAAATGGGATAAATCTGTAAATGTTCACTCTCACTAACTTAACATTCACAAAGT	471
Db	473	acgaaaatgaggataaatctgtlaatgttcaactcttaacttaacatcaacaagt	525

RESULT	12	
	255624	
ID	255624	standard; cDNA; 582 BP.
XX		
AC	255624;	
XX		
DT	27-MAR-2000	(first entry)
XX		
DE	Equine interleukin-18 (IL-18)	CDNA.
XX		
KW	Interleukin-18; IL-18;	adjuvant; vaccine; immune reaction; equine; ss.
XX		
OS	Equus caballus.	
XX		
FH	Key	Location/Qualifiers
FT	CDS	1..582
FT		/*tag= a
FT		/product= "Equine IL-18"

PN	WO9956775-A1.
XX	
PD	11-NOV-1999.
XX	
PF	04-MAY-1999; 99WO-EP03098.
XX	
PR	07-MAY-1998; 98EP-0201451.
XX	
PA	(ALKU) AKZO NOBEL NV.
XX	
PI	Nicolson L, Rijske EO;
XX	
DR	WPI; 2000-072212/06.
DR	P-PSDB; Y58241.
XX	
PT	Novel vaccine adjuvant used to increase the immune response
XX	
PS	Claim 11, Page 22; 28pp; English.

CC This sequence represents cDNA encoding equine interleukin-18 (IL-18).
CC The cDNA was produced from alveolar macrophage mRNA via reverse
CC transcription using primer 255625, and the cDNA amplified via PCR using
CC primers 255626-255629. The invention relates to the use of recombinant
CC IL-18 as a vaccine adjuvant. Adjuvants are used in vaccines to
CC potentiate the immune response to an antigen derived from the pathogen.
CC It is important that the correct type of immune reaction is triggered,

CC since many types of immune mechanisms that can be activated are
CC inadequate for the control of a particular pathogen. Mice were injected
CC intramuscularly with a vaccine formulation either containing inactivated
CC pseudorabies virus (PRV) plus tetanus toxoid (TT), or a formulation
CC containing inactivated PRV, TT and 0.1 micrograms of recombinant murine
CC IL-18. When subsequently challenged with virulent PRV, unvaccinated
CC control mice all succumbed to the infection, and only 30% of mice
CC vaccinated with vaccine antigen alone (inactivated PRV plus TT) survived
CC the infection. In contrast, mice which received the same amount of
CC vaccine antigen in conjunction with IL-18 had an 80% survival rate
CC after infection. IL-18 may be used as an adjuvant in vaccines for the
CC immunisation of humans and other animals, such as pigs, sheep, birds,
CC cattle, dogs, horses and fish. An adjuvant composition comprising
CC IL-18 may be administered concomitantly or sequentially with a vaccine
CC formulation. Additionally, IL-18 nucleotides operably linked to
CC transcriptional regulatory sequences may be used in DNA vaccines for the
CC in vivo expression of IL-18 in the cells of a vaccinated animal.

Query Match	57.0%;	Score 268.4;	DB 21;	Length 582;
Best Local Similarity	76.5%;	Pred. No. 8.8e-67;		
Matches 355; Conservative	1;	Mismatches 102;	Indels 6;	Gaps 22;

[illegible]

RESULT	13
A10526	
ID	A10526 standard; cDNA; 477 BP.
XX	
AC	A10526;
XX	
DT	23-JUN-2000 (first entry)
XX	
DE	Human interleukin-18 (IL-18) nucleotide sequence.
XX	
KW	Interleukin-18; production; IL-18; human; ss; medical injection product
XX	
OS	Homo sapiens.
XX	
PN	CN1243130-A.
PN	

XX 02-FEB-2000.
PD
XX
XX 24-JUL-1998; 98CN-0103307.
PF
XX
XX 24-JUL-1998; 98CN-0103307.
PR
XX
XX (WUGG/) WU G.
PA
XX
PI Wu G, Liu Z;
XX
XX WPI; 2000-340020/30.
DR P-PSDB; Y85167.
XX
XX Preparation method for engineering bacteria for recombination of human
PT interleukin-18 and its product thereof -
XX
XX
PS Claim 1; Page 2; 17pp; English.
XX
XX This sequence represents the human interleukin-18 (IL-18) nucleotide
CC sequence. The invention relates to a method for engineering bacterium for
CC recombination of human IL-18 and a method for the preparation of IL-18. A
CC primer containing a restriction endonuclease site can be used to
CC accurately obtain the IL-18 gene containing 474 nucleotides, and uses the
CC stop codon preferred by coli bacillus to raise the expression rate. The
CC method uses a high-amplification culture medium to increase the
CC expression level and only requires a one-step purification process to
CC obtain a medical infection-pure product.
XX
XX Sequence 477 BP; 169 A; 77 C; 89 G; 141 T; 1 other;
SQ

Query Match 52.9%; Score 249.2; DB 21; Length 477;
Best Local Similarity 73.2%; Pred. No. 2.2e-61;
Matches 346; Conservative 1; Mismatches 120; Indels 6; Gaps 2;
QY 2 ACTTTGGCCGACTTCACTGTACACCGCAGTAATACGGAATATAATGACCAAGTTCCT 61
DB 5 actttggcaagcttgaatctaataatnataatcagtaagaatttgaatgaccaagtctct 64
QY 62 TCGTTGACAAAGACA--GCCGTGTTCGAGGATATGATGATATGATCAAAAGTGCCA 118
DB 65 tcaatgaccaagaataatcgccctctatttgaagatatgactgactgtagagata 124
QY 119 GTGAACCCGACAGACACTGATAATATATACATGTACAAGACAGTGAAGTAGAGAGCTGG 178
DB 125 atgcaccccgagcaccataattatataaagtatatataaagatagcagcctagagtagtg 184
QY 179 CTGTGACCCCTCTCTGTGAAGGATAGTAATAAYGTCTACCTCTCTCTGTAAGACACAGATCA 238
DB 185 ctgtactatctctgtgaagtgtgagaaaaatttcaactctctcctgtgagaaacaaatta 244
QY 239 TTTCCCTTGGAGGAATGATCCACTGAAATATTTGATGATATACAAAGTGATTCATAT 298
DB 245 ttcccttaagaagaatgaatccctcctgataacatacaagatacaaaaagtacatcatat 304
QY 299 TCTTTGAGAAACGTGTCCAGGAC--ACAACAAGATGAGTTTGAATCTTCACTGTATG 355
DB 305 tcttcaagagaagtgtcccgagcagataataaagtcaatttgaatcttcatcatacg 364
QY 356 AAGGACACTTCTTGTGTCGCAAAAGAGAGATGATGCTTCAAACTCATCTTGAAAAAAA 415
DB 365 aaggaatacttctagctgtgagaaaaagagagagacccctttaaactcatcttgaaaaaag 424
QY 416 AGGATGAAATGGGGATAAATCTGTAATGTTCACTCTCACTTAACCTTACATCAA 468
DB 425 aggaatgaattggygagatagatcataatgttccactgttcaaaaagaactaa 477

RESULT 14
V48226
ID V48226 standard; CDNA; 471 BP.
XX

AC V48226;
XX
XX 16-NOV-1998 (first entry)
DT
XX
XX Human interleukin 18 gene.
DE
XX
XX Human: interleukin-18; IL-18; osteoclast; hypercalcaemia; osteopenia; ds;
KW osteoclastoma Behcet's syndrome; osteosarcoma; arthropathy; osteoporosis;
KW chronic rheumatoid arthritis; deformity ostitis; primary hyperthyroidism.
XX
XX Homo sapiens.
OS
XX
XX Key Location/Qualifiers
FH 1.471
FT CDS /*tag= a
FT /product= "Interleukin 18"
FT /note= "No stop or start codon given"

EP861663-A2.
XX
XX 02-SEP-1998.
PD
XX
XX 24-FEB-1998; 98EP-0301352.
PF
XX
XX 25-FEB-1997; 97JP-0055468.
PR
XX
XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA
XX
XX Gillespie MT, Horwood NJ, Kurimoto M, Udagawa N;
PI
XX
XX WPI; 1998-448964/39.
DR P-PSDB; W77077.
XX

Use of interleukin-18 to inhibit osteoclast formation - in treatment
PT of e.g. hypercalcaemia, osteoclastoma, Behcet's syndrome,
PT osteosarcoma, chronic rheumatoid arthritis, deformity ostitis,
PT primary hyperthyroidism and osteoporosis
XX
XX Disclosure; Page 19-20; 56pp; English.

Interleukin-18 (IL-18) or a functional equivalent can be used for
CC inhibition of osteoclast formation. IL-18 is used for treating or
CC preventing osteoclast-related diseases e.g. hypercalcaemia, osteoclastoma
CC Behcet's syndrome, osteosarcoma, arthropathy, chronic rheumatoid
CC arthritis, deformity ostitis, primary hyperthyroidism, osteopenia and
CC osteoporosis.
XX
XX Sequence 471 BP; 166 A; 77 C; 88 G; 140 T; 0 other;
SQ

Query Match 52.6%; Score 247.8; DB 19; Length 471;
Best Local Similarity 73.3%; Pred. No. 5.4e-61;
Matches 344; Conservative 1; Mismatches 118; Indels 6; Gaps 2;
QY 2 ACTTTGGCCGACTTCACTGTACACCGCAGTAATACGGAATATAATGACCAAGTTCCT 61
DB 2 actttggcaagcttgaatctaataatnataatcagtaagaatttgaatgaccaagtctct 61
QY 62 TCGTTGACAAAGACA--GCCGTGTTCGAGGATATGATGATATGATCAAAAGTGCCA 118
DB 62 tcaatgaccaagaagaataatcgccctctatttgaagatatgactgactgtagagata 121
QY 119 GTGAACCCGACAGACACTGATAATATATACATGTACAAGACAGTGAAGTAGAGAGCTGG 178
DB 122 atgcaccccgagcaccataattatataaagtatatataaagatagcagcctagagtagtg 181
QY 179 CTGTGACCCCTCTCTGTGAAGGATAGTAATAAYGTCTACCTCTCTCTGTAAGACACAGATCA 238
DB 182 ctgtactatctctgtgaagtgtgagaaaaatttcaactctctcctgtgagaaacaaatta 241
QY 239 TTTCCCTTGGAGGAATGATCCACTGAAATATTTGATGATATACAAAGTGATTCATAT 298
DB 242 ttcccttaagaagaatgaatccctcctgataacatacaagatacaaaaagtacatcatat 301

